

REMARKS

Status of the Claims

This paper is in response to the Office Action dated May 7, 2007. Applicants have amended claims 1, 3, 13, 24, and 34. Claims 2, 7, 8, 11, 12, 19, 22, 23, 29, 40 and 41 are cancelled.

Applicants add new dependent claims 42-53. The new claims read on the species elected (Species A-Figure 1) in response to the restriction requirement mailed August 24, 2006. Consideration of the claims is respectfully requested.

Amendments to the Claims

Applicants have amended claims 1, 3, 13, 24, and 34. Support for the amendments of claims 1, 13, 24, and 34 can be found throughout the specification of U.S. Published Application No.: 2005/0177249, especially in paragraph 59 and in the examples.

Although Applicants disagree with each of the pending rejections, Applicants present the following amendments and cancellations for the sole purpose of expediting prosecution of the pending claims. It is understood that such amendments and cancellations are made without prejudice, and do not amount to Applicants acceptance of the Office Action's rejections. Applicants reserve the right to prosecute any of the former forms of the claims in a continuing application.

Applicants believe that the pending claims as presented in this paper are in condition for allowance and respectfully request the Examiner to withdraw the rejections.

Novelty of the Claims Pursuant to 35 U.S.C. §102 over Schwartz:

Claims 1-3, 5, 6, 13-15, 17, 18, 24, 25, 27, 28, and 34-36 are rejected pursuant to 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 7,163,563 of Schwartz. The claims, however, are all novel in light of the amendments and remarks contained herein.

Novelty of the Claim 1 and its Dependent Claims:

Amended claim 1 recites a composite implant for repairing a tissue defect in a patient. The implant comprises a wedge-shaped porous tissue scaffold formed from a bioresorbable, synthetic polymeric material, and includes at least one pocket formed therein which is adapted to contain a viable tissue. Furthermore, the implant is such that cells from the viable tissue can migrate into the scaffold.

Such a scaffold may be advantageous. For example, associating the scaffold with viable tissue allows for the direct delivery of viable cells to the site of injury or defect without the cost associated with the isolation and amplification of cells in culture. Furthermore, the time required for carrying out repair is shortened, since there is no need to procure healthy tissue from which cells for seeding the scaffold have to be isolated and amplified prior to implantation surgery (see paragraphs 4 and 5 of the published application).

The Schwartz reference, teaches, interalia, a unitary surgical device having biocompatible bioresorbable fixation elements connected to a base on to which is supported extracellular-matrix (ECM) tissue regeneration material for the repair of damaged meniscus tissue. Schwartz further discloses incorporating bioactive agents, cells and biologically derived agents into the scaffold. However, Schwartz is silent regarding a wedge-shaped porous tissue scaffold formed from a bioresorbable, synthetic polymeric material with viable tissue *whose cells can migrate into the scaffold* as recited by amended claim 1. Schwartz, thus does not anticipate the recitations of amended claim 1.

Claims 3-6, 9 and 10 depend on amended claim 1. The dependent claims incorporate the recitation of the base claim. Claims 3-6, 9 and 10 are thus patentable for at least the same reasons mentioned above for amended claim 1.

Novelty of the Claim 13 and its Dependent Claims:

Independent claim 13 is also patentable over Schwartz. Claim 13 recites a composite implant for tissue repair comprising a wedged shaped porous scaffold having at least one pocket therein. Viable tissue, such as minced tissue, sliced tissue, or slivered tissue is disposed within the scaffolds' pocket. The viable tissue has viable cells capable of migrating out of the tissue into the scaffold.

As such, Schwartz does not recite the claimed implant as mentioned above in overcoming the novelty rejection of amended claim 1. Schwartz is also silent regarding the use of minced, sliced or slivered tissue as recited by amended claim 13. Accordingly, amended claim 13, is novel in view of this reference.

Claims 14-18, 20, and 21 depend on amended claim 13, incorporating the recitation of the base claim. The dependent claims are therefore patentable for at least the same reasons mentioned above for amended claim 13.

Novelty of the Claim 24 and its Dependent Claims:

Amended claim 24 recites a method for repairing defective tissue. The claimed method comprises loading viable tissue into at least one pocket formed by an opening in the sidewall of a tissue scaffold. The viable tissue has cells capable of migrating out of the tissue into the scaffold. The claimed method further comprises implanting the tissue scaffold containing viable tissue disposed therein at a defect site in a patient's body such that native tissue surrounding the tissue scaffold abuts the opening to maintain the viable tissue within the pocket.

The Schwartz reference does not recite the claimed method for tissue repair. As mentioned above for amended claim 1, Schwartz does not disclose the claimed composite implant, and Schwartz is silent with regards to the viable tissue serving as a cell source for impregnating the scaffold. Schwartz, therefore, does not anticipate the recitations of amended claim 24. Furthermore, claims 25-28 and 30-31 depend on amended claim 24 and incorporate its limitations. The dependent claims are patentable for at least the same reasons as mentioned above for amended claim 24.

Novelty of the Claim 34 and its Dependent Claims:

Claim 34, recites a method for repairing tissue by providing a scaffold having at least one pocket adapted to contain viable tissue in the form of minced, sliced or slivered tissue fragments. The pocket is formed by an opening in the sidewall of the scaffold. The scaffold containing the tissue fragment is implanted at a defect site in a patient such that the surrounding tissue abuts the opening in the sidewall of the scaffold.

As mentioned above for amended claim 13, Schwartz fails to disclose the use of sliced, slivered or minced tissue in a method for repairing tissue in which cells from viable tissue fragments in a pocket of the scaffold migrate into the scaffold. Amended claim 34 is therefore patentable over Schwartz. Additionally, the dependent claims 35-39 incorporate the limitations of amended claim 34 and are thus patentable for at least the same reasons mentioned above for the base claim.

Claims 34-39 are not anticipated by Schwartz, and the Examiner is respectfully requested to withdraw the rejection.

Novelty of the New Claims:

Applicants add new claims 42-43, 44-47, 48-49, and 50-53 which depend on independent claims 1, 13, 24 and 34 respectively. Support for claims 44, and 49 can be found in the specification of U.S. Patent Publication No.: 2005/0125077 which is incorporated by reference in the present application (see paragraphs 34 and 40 of U.S. Patent Publication No.: 2005/0125077). Support for claims 42, 45, 46, 48, 51, and 52 can be found throughout the instant specification, especially in paragraph 61 and in Examples 1-4 of the Published Patent Application No.: 2005/0177249. Support for new claims 43, 47, 49 and 53 can be found in the specification, and especially in Example 5 of the Published Patent Application No.: 2005/0177249. Applicants state that new claims 42-49 read on the elected species (Figure 1). No new subject matter has been added.

New claims 44 and 49 all recite the tissue fragment to have dimensions in a range from about 200 μm to about 3 mm. Schwartz is silent regarding the dimensions of the tissue fragments, nor does Schwartz disclose tissue fragments having particles of a particular size as recited by claim 45, and 51. Furthermore, Schwartz fails to teach or even suggest that the cells populating the scaffold are from the viable tissue in the at least one pocket of the scaffold as recited by new claims 42, 46, 48 and 52. Rather, Schwartz discloses using a cell suspension to impregnate the base of the scaffold, or the use of a scaffold onto which cells have been cultured. Schwartz is also silent regarding populating the scaffold with cells from native tissue. The new claims 42-53 are thus novel in view of Schwartz and contain patentable subject matter.

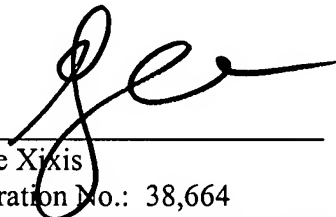
Furthermore, new dependent claims, 42-53, incorporate the recitations of their respective base claims. As such, these dependent claims are patentable over Schwartz for at least the same reasons mentioned above in the section regarding the novelty of their respective base claims.

Conclusion

In conclusion, Applicants submit that all claims are now in condition for allowance, and allowance thereof is respectfully requested. The Examiner is encouraged to telephone the undersigned attorney for Applicants if such communication is deemed to expedite prosecution of this application.

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Respectfully submitted,


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